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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,155	12/01/2003	Raymond V. Damadian	DAMADIAN 3.0-094	1774

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WESTFIELD, NJ 07090

EXAMINER
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MEHTA, PARIKHA SOLANKI

ART UNIT	PAPER NUMBER
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3737

MAIL DATE	DELIVERY MODE
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08/14/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/725,155

Applicant(s)

DAMADIAN, RAYMOND V.

Examiner

Parikha S. Mehta

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.138(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Amendment*

1. The amendments to the specification filed on 6 March 2007 are sufficient to overcome the objection to the specification set forth in the previous Office Action. Accordingly, this objection is hereby withdrawn.
2. The amendment to claim 16 filed on 6 March 2007 is sufficient to overcome the rejection of the same claim under 35 U.S.C. 112 set forth in the previous Office Action. Accordingly, this rejection is hereby withdrawn.
3. The amendment filed on 6 March 2007 under 37 CFR 1.131 has been considered but is ineffective to overcome the Zuk (US PG Pubs. No. 2002/0123681) reference.

Applicant has amended the independent claims to include the recitation that the patient support is “capable of positioning a patient supported thereon with three degrees of motion”. With regard the statement of intended use and other functional statements (“capable of...”), they do not impose any structural limitations on the claims distinguishable over Zuk (‘681), which is in fact capable of being used as claimed if one so desires to do so [see *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963)]. The law of anticipation does not require that the reference “teach” what the subject patent teaches, but rather it is only necessary that the claims under attack “read on” something in the reference. *Kalman v. Kimberly Clark Corp.*, 218 USPQ 781 (CCPA 1983). Furthermore, the manner in which a device is intended to be employed does not differentiate the claimed apparatus from prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). One of reasonable skill in the art at the time of invention could reasonably move the entire reference system, which includes the patient support, in any direction in three-dimensional space. Additionally, Zuk (Figs. 3 & 4) clearly shows the table being translated along a longitudinal axis, constituting a first degree of motion, and the patient is capable of moving while on the support in a transverse direction, constituting a second degree of motion. One of reasonable skill in the art at the time of invention could furthermore adjust the height of the entire reference invention in a vertical direction, constituting a third degree of motion, if so desired.

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Therefore, the reference patient support is considered to be capable of positioning a patient supported thereon with three degrees of motion, as claimed in the instant application.

As Applicant's amendments are insufficient to overcome the prior art, the rejection of claims 1-22 set forth in the previous Office Action is maintained and reiterated herein.

### *Claim Rejections - 35 USC § 102*

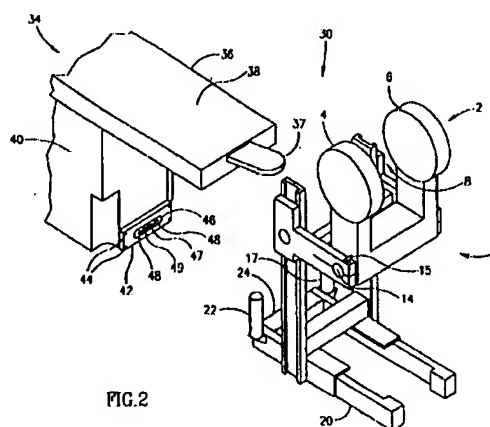
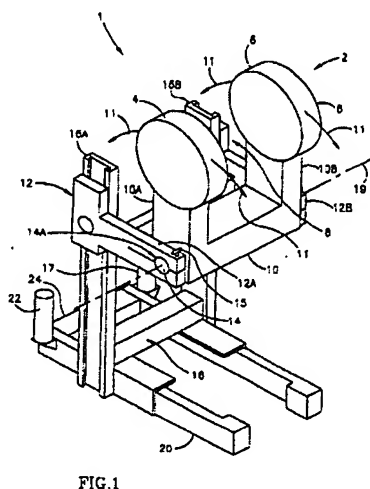
4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3-7, 9, 21 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Zuk (US Pre-Grant Publication No. 2002/0123681).

Regarding claims 1, 3-7 and 12-14, Zuk ('681) discloses a U-shaped superconducting magnet 10 having a gap for receiving a patient, and means 17 for moving the magnet so that a portion of a region of interest of the patient can be imaged, the means comprising an electrical motor which may be connected to a jack for lowering or raising the magnet (Fig. 1, ¶ 0019-21, ¶ 0065). Zuk ('681) shows a patient support platform 36 positioned within the gap for supporting the patient (Fig. 2). Zuk ('681) also provides vertical support members 16A for moving the magnet in a vertical direction (Figure 1).



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*(Source: Zuk (US PG Pubs. No. 2002/0123681), pages 2 & 3)*

Zuk ('681) further discloses that the electrical motor may be mechanically coupled to the framework, thereby comprising an electromechanical device (§ 0065).

Regarding claims 21 and 22, Zuk ('681) discloses that the U-shaped magnet may be superconductive (§ 0021).

Regarding claim 17, Zuk ('681) discloses a method of using the aforementioned apparatus, which includes establishing a static magnetic field between the magnet gap of the above-noted apparatus, positioning a patient within a patient receiving space, positioning the magnetic field by vertically translating the magnet, and obtaining an MR image of the patient's anatomy (§ 0015, § 0082). Zuk ('681) provides for the use of a gradient coil as the MRI probe, which inherently supplies a gradient magnetic field for obtaining the patient image (§ 0139). Zuk ('681) further discloses supporting the patient on an operating table, equivalent to a patient support, while in the patient receiving space (§ 0112). Zuk ('681) provides a step for moving the MRI probe into a position suitable for imaging a selected portion of the patient's anatomy, which inherently anticipates lowering the magnet (§ 0092). Zuk ('681) further discloses that screws may be used to mechanically couple the motor to the magnet to control motion of the magnet (§ 0065).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zuk ('681) in view of Cho (Foundations of Medical Imaging, Wiley Interscience, © 1993). Zuk ('681) discloses all features of the present invention as described above, with the exception of explicitly specifying that the U-shaped magnet is a solenoid. It is well-known in the art to use a solenoid in situations where an electromagnet is needed, and it is also well-known that state-of-the-art MRI systems for medical imaging commonly employ solenoids as electromagnets. For example, Cho (1993) states that solenoids are

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commonly used in medical MR imaging systems (p. 257). Thus, it would have been obvious to one of ordinary skill in the art to create a medical imaging system according to Zuk ('681), employing a solenoid for the disclosed electromagnet, in light of the MR imaging techniques known at the time of invention.

8. Claims 8, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zuk ('681) in view of Hayashi (US Pat. No. 6,424,854). Zuk ('681) discloses all features of claims 5 and 9, upon which claims 8, 15, and 16 depend, as described above. Zuk ('681) is silent with respect to whether mechanical device used to couple the magnet to the motor is hydraulic or pneumatic. Hayashi ('854) describes the use of a hydraulic device for positioning a magnet during magnetic resonance imaging (col. 3 line 65 – col. 4 line 3). It would have been obvious to one of ordinary skill in the art at the time of invention to use a pneumatic device in place of a hydraulic device, as it is well-known in the art that both devices are MR-imaging compatible. The pneumatic device provides the advantage that, in the event of a leak or malfunction, it would not release liquid that could potentially damage the electrical motor. It then follows that it would have been obvious to one of ordinary skill in the art to use a hydraulic or pneumatic device to mechanically couple the motor and magnet of Zuk ('681), in view of the teachings of Hayashi ('854).

### *Conclusion*

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hanley et al (US Pat. No. 5,565,834) disclose a related apparatus and method for vertically adjusting a magnet for MR imaging.

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

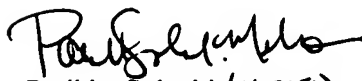
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Parikha Solanki whose telephone number is 571.272.3248. The examiner can normally be reached on M-F, 8 - 4:30pm.

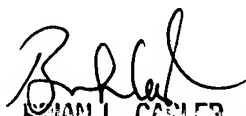
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571.272.4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Parikha Solanki (MEHTA)  
Examiner – Art Unit 3737



BRIAN L. CASLER  
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